

**Amendments to the Drawings:**

The attached replacement drawing sheets make changes to Figs. 1-2 and replace the original sheets with Figs. 1-2. Also, formal replacement sheets have been provided for all Figs. 1-38.

Attachment: Replacement Sheets (38)

**REMARKS**

Claims 1-21 are pending in this application. By this Amendment, claims 1, 7, 11, 20, and 21 have been amended. No new matter has been added.

In paragraphs 2 and 3, on pages 2 and 3 of the Office Action, the drawings were objected to. In reply to the objection to the drawings, as MPEP §608.02 states, "Drawings on paper are acceptable as long as they are in compliance with 37 CFR 1.84." As 37 C.F.R. §1.84(q) states, "Lead lines are those between reference characters and the details referred to... and must be executed in the same way as lines in the drawings." The replacement sheet for Fig. 1 properly places the reference lines in compliance with §1.84(q). The replacement sheet for Fig. 2 changes one of the reference numbers "111" to "111c" in agreement with the specification on page 28, line 25.

As to reference characters 25A and 25a, the specification clearly states that the upper magnetic pole layer 25 comprises a first magnetic pole part 25a in contact with the recording gap layer 24, and a second magnetic pole part 25b disposed on the first magnetic pole part 25a (page 27, lines 9-13). Because the second magnetic pole part 25b is disposed on the first magnetic pole part 25a and both the first and second magnetic pole parts 25a, 25b form the upper magnetic pole layer 25, the reference lines for the first magnetic pole part 25a and the second magnetic pole part 25b are drawn to the same upper magnetic pole layer 25. The specification also clearly states that the upper magnetic pole layer 25 also comprises a track width defining part 25A and a yoke part 25B (page 27, lines 13-14). As clearly shown in the replacement sheet for Fig. 1, reference character 25A does not designate the same part as reference characters 25a, 25b, or 25B.

As to the Office Action assertion that separate figures are not separately labeled (see Figs. 4 and 5, for example), Applicants respectfully submit that the figures are properly labeled in compliance with 37 C.F.R. §1.84. In particular, as the Brief Description of the

Drawings states, "Fig. 4A is a sectional view of the thin-film coil taken along the line IV-IV of Fig. 2, whereas Fig. 4B is a sectional view thereof taken along a plane parallel to an air-bearing surface" (page 19, lines 22-25). As clearly shown in the drawings filed on September 29, 2003, the figures are properly labeled Fig. 4A and Fig. 4B. Similarly, Fig. 5 is properly labeled as Fig. 5A and Fig. 5B. As 37 C.F.R. §1.84(u) states, "partial views intended to form one complete view, on one or several sheets, must be identified by the same number followed by a capital letter. As clearly shown in Figs. 4 and 5, the partial views are properly labeled with numbers 4A and 4B and similarly, numbers 5A and 5B." Accordingly, the figures are properly labeled in compliance with 37 C.F.R. §1.84(u). Thus, the drawings are in compliance with 37 CFR §1.84 and it is respectfully requested that the objection to the drawings be withdrawn.

In paragraph 4, on page 3 of the Office Action, the specification was objected to for minor informalities found therein. For at least the reasons discussed above with respect to the drawings, the minor informalities objected to have been corrected. Thus, it is respectfully requested that the objection to the specification be withdrawn.

Applicants appreciate the indication of the allowability of claims 7-10 in paragraph 13, on page 9 of the Office Action. Accordingly, claim 7 has been rewritten in independent form and claims 8-10 depend from claim 7. Thus, claims 7-10 are allowable.

In paragraph 7, on page 4 of the Office Action, claims 1, 2, 11, and 12 were rejected under 35 U.S.C. §102(e) over Jiang et al. (Jiang), U.S. Patent Publication No. 2004/0075943A1. The rejection is respectfully traversed.

Applicants' invention of claim 1 calls for a thin-film magnetic head, comprising first and second magnetic pole groups, magnetically connected to each other, having respective magnetic pole parts opposing each other on a side of a medium-opposing surface opposing a recording medium; a recording gap layer formed between the magnetic pole parts; a thin-film

coil insulated from the first and second magnetic pole groups and helically wound about at least one of the first and second magnetic pole groups; and a substrate having the first and second magnetic pole groups, recording gap layer, and thin-film coil laminated thereon; the thin-film coil comprising a first conductor group having a plurality of inner conductor parts disposed between the first and second magnetic pole groups, a second conductor group having a plurality of outer conductor parts disposed outside the second magnetic pole group, and a connecting part group having a plurality of connecting parts for connecting the inner conductor parts to the outer conductor parts; the first conductor group including an insulating contact structure for making the inner conductor parts in contact with each other by way of an insulating film, the second conductor group including an insulating contact structure for making the outer conductor parts in contact with each other by way of an insulating film; a first insulating film interposed between the inner conductor parts and the first magnetic pole groups; a second insulating film interposed between the outer conductor parts and the second magnetic pole groups; the plurality of inner conductor parts comprising the inner conductor parts which are in contact with the first insulating film and the inner conductor parts which are not contact with the first insulating film; and the plurality of outer conductor parts comprising the outer conductor parts which are in contact with the second insulating film and the outer conductor parts which are not contact with the second insulating film. Jiang fails to disclose these features.

In paragraph 7, on page 4 of the Office Action, it is alleged that the thin-film coil 140 of Jiang comprises a first conductor group 140 having a plurality of inner conductor parts 142 and a second conductor group 146 having a plurality of outer conductor parts 146. Because the thin-film coil 140 of Jiang is alleged to be the first conductor group 140, the thin-film coil 140 cannot have interposed the second conductor group 146.

In Jiang, the thin-film recording head 100 can be considered as a solenoidal thin-film head (paragraph [0021]). The coil 140 includes a bottom portion 142, a pad portion 144, and a top portion 146 (paragraph [0021]). The pad portion 144 electrically connects the bottom portion 142 and the top portion 146 of the coil 140 (paragraph [0021]). The bottom portion 142 and the top portion 146 of the coil 140 are essentially bars of conductive material (paragraph [0021]); Figs. 3- 4). The pads for the pad portion 144 are preferably configured to allow individual pads to be electrically isolated (paragraph [0021]).

As shown in Figs. 3-4 of Jiang, the insulator 152 is positioned below bottom portion 142 and is in contact with all the inner conductor parts 142. Also, insulation 160 is positioned below top portion 146 and is in contact with all the outer conductor parts 146.

Accordingly, Jiang fails to disclose or suggest that plurality of inner conductor parts 142 comprises the inner conductor parts 142 which are in contact with the first insulating film, i.e., insulator 152 of Jiang, and the inner conductor parts 142 which are not contact with the first insulating film, i.e., insulator 152 of Jiang (Figs. 3 -4).

Further, Jiang fails to disclose or suggest that the plurality of outer conductor parts (i.e., outer conductor parts 146 as identified by the Office Action) comprises the outer conductor parts 146 which are in contact with the second insulating film, i.e., insulator 160 of Jiang, and the outer conductor parts, i.e., outer conductor parts 146, are not contact with the second insulating film, i.e., insulator 160 of Jiang (Figs. 3 -4).

Applicant's thin-film magnetic head, on the other hand, includes a first insulating film interposed between the inner conductor parts and the first magnetic pole groups and a second insulating film interposed between the outer conductor parts and the magnetic pole groups (Figs. 4 and 10-12). Also, for example, when the thin-film coil is formed by burying a conductor between grooves of conductor part, such as the first and second conductor groups, the plurality of inner conductor parts that includes the inner conductor parts which are in

contact with the first insulating film and the inner conductor parts which are not in contact with the first insulating film are formed. Similarly, the plurality of outer conductor parts that includes the outer conductor parts which are in contact with the second insulating film and the outer conductor parts which are not contact with the second insulating film (paragraphs [0072-0076]). Jiang fails to disclose these features.

Accordingly, Jiang does not literally disclose each and every feature of Applicant's claimed invention as recited in claim 1 and the rejection under 35 U.S.C. §102 is inappropriate. Further, for the reasons discussed, Jiang does not suggest the features as recited in claim 1.

Because Jiang does not disclose or suggest the features of claim 1, Jiang cannot possibly anticipate or suggest the subject matter of claims 2, 11, and 12, which depend from claim 1 for the reasons discussed with respect to claim 1 and for the additional features recited therein. It is respectfully requested that the rejection be withdrawn.

In paragraph 10, on page 5 of the Office Action, claims 3-5 were rejected under 35 U.S.C. §103(a) over Jiang in view of Kawakami et al. (Kawakami), JP 55-12523A. The rejection is respectfully traversed.

Kawakami fails to overcome the deficiencies of Jiang as applied to claim 1.

Accordingly, neither of the applied references, nor the alleged combination thereof, disclose or suggest all the features recited in claim 1, so the alleged combination cannot possibly suggest claims 3-5, which depend from claim 1 for that reason and for the additional features recited. It is respectfully requested that the rejection be withdrawn.

In paragraph 11, on page 7 of the Office Action, claim 6 was rejected under 35 U.S.C. §103 over Jiang in view of Takeda et al. (Takeda), JP 05-250636A. The rejection is respectfully traversed.

Takeda fails to overcome the deficiencies of Jiang as applied to claim 1.

Accordingly, neither of the applied references, nor the alleged combination thereof, disclose or suggest all of the features recited in claim 1, so the alleged combination cannot possibly suggest claim 6, which depend from claim 1 for that reason and for the additional features recited. It is respectfully requested that the rejection be withdrawn.

In paragraph 12, on page 8 of the Office Action, claims 20 and 21 were rejected under 35 U.S.C. §103(a) over Jiang. The rejection is respectfully traversed.

As admitted by the Examiner in paragraph 12, on page 8 of the Office Action, Jiang fails to disclose a head gimbal assembly comprising a support; a thin-film magnetic head formed on the support; and a gimbal for securing the support, as recited in claims 20. Also as admitted by Examiner, Jiang fails to disclose a hard disk drive comprising a head gimbal assembly including a thin-film magnetic head, as recited in claim 21.

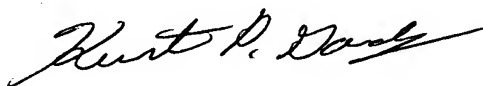
For at least the reasons discussed above, Jiang also fails to disclose or suggest a first insulating film interposed between the inner conductor parts and the first magnetic pole groups; a second insulating film interposed between the outer conductor parts and the second magnetic pole groups; the plurality of inner conductor parts comprising the inner conductor parts which are in contact with the first insulating film and the inner conductor parts which are not contact with the first insulating film; and the plurality of outer conductor parts comprising the outer conductor parts which are in contact with the second insulating film and the outer conductor parts which are not contact with the second insulating film, as recited in claims 20 and 21.

Because the alleged combination of Jiang and the knowledge of one skilled in the art at the time the invention was made does not disclose or suggest all the features recited in claims 20 and 21, the alleged combination cannot possibly render obvious the subject matter of claims 20 and 21. Thus, withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6, 11, 12, 20 and 21, as well as allowable claims 7-10 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:KPG/tea

Attachment:  
Replacement Sheets (38)

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